

Staff Report

Report To: Council
Report From: Geoff Aitken, CET – Manager of Public Works
Meeting Date: August 15, 2023
Subject: IPW-2023-08 – 2022 Annual Landfill Monitoring Reports

Recommendations:

That in consideration of staff report “IPW-2023-08 – 2022 Annual Landfill Monitoring Reports”, council receives the report for information purposes.

Highlights:

- The Municipality of West Grey provides waste management services for its residents and ratepayers.
- This service includes diversion programs for numerous items such as: blue box recycling, cardboard, scrap metal, electronic waste, batteries, film plastics, fluorescent lights, Styrofoam, mattresses, yard waste, brush, clean wood, and most recently the Mobile Household Hazardous Waste (HHW) collection unit.
- The municipal landfill sites are an integral part of the infrastructure and service of the municipality, and their effective management is important to long term sustainability.

Previous Report/Authority:

[2022 Annual Monitoring Report – Neustadt Landfill Site](#)

[2022 Annual Monitoring Report – Glenelg Waste Disposal Site](#)

[2022 Annual Monitoring Report – Normanby Waste Disposal Site](#)

[2022 Annual Monitoring Report – Durham Waste Disposal Site](#)

[2022 Annual Monitoring Report – Bentinck Landfill Site](#)

Analysis:

The five municipally-owned landfill sites require monitoring per the requirements of the respective Certificates of Approval (C of A) issued by the Ministry of Environment,

Conservation and Parks (MECP). Three landfills (Neustadt, Glenelg, and Normanby) are closed, in the monitoring phase, and are no longer receiving waste or open to the public.

The Durham site is operating as a depot / transfer station only receiving small quantities of bagged waste (which must be transferred off site) and most diversion materials. The Bentinck site is operating as the municipality's main waste management site receiving diversion materials and actively burying waste for the whole of West Grey.

Neustadt Landfill Annual Monitoring Report (AMR) Key Findings:

- The site reached its approved capacity in 1992 and is closed.
- No leachate observed, ground cover, drainage and fencing adequate.
- Site consistently showing minimal if any negative impact since the site had a low rate of waste placement and likely had some of the waste burned prior to burial.
- The site has been closed for greater than 25 years and is expected to be past its peak contaminating period.

Glenelg Waste Disposal Site AMR Key Findings:

- The site reached its approved capacity in 2005 and is closed.
- No leachate observed, ground cover, drainage and fencing adequate.
- Test Well TW-8 no longer shows exceedances at Reasonable Use Criteria (RUC).
- Ground water quality expected to remain stable or improve over time.
- Potential for off site impacts is considered low, ground water along property boundary shows no impacts from landfill.

Normanby Waste Disposal Site AMR Key Findings:

- Landfilling began in 1974 and the site reached its approved capacity in 2019 and is now closed.
- Formal closing and capping operations are complete as per the approved closure plan.

Durham Waste Disposal Site AMR Key Findings:

- Landfilling began in 1965, the site reached its approved capacity in 2020 and is now operating as a transfer station.
- MECP recommendation to continue current monitoring program.
- New monitoring wells were installed on July 7, 2023 per MECP recommendation.
- Site is equipped with a scale, scale house, additional staff shelter (shed) and a portable toilet.
- Current onsite diversion programs include: blue box recycling, scrap metal, film plastics, batteries, electronic waste, appliances (with and without freon), yard waste (leaves & grass clippings), brush, and clean untreated wood.

Bentinck Landfill AMR Key Findings:

- Approved in 1972, began landfilling operations in 1974.
- Receives waste from entire municipality.
- Site is equipped with a scale, scale house, additional staff shelter/shed, and a portable toilet.
- Currently no apparent impact to the ground water leaving the property.
- Surface water monitoring indicates downstream water quality is consistent with upstream background sampling.
- Prior to receiving all the waste from the entire municipality, the fill rate was estimated at 4,100m³ per year, with an estimated theoretical life expectancy of 39 years.
- In 2022 the site began receiving waste from the entire municipality and the fill rate significantly increased to 9,100m³ per year, with an estimated theoretical life expectancy of 17 years.

Long Term Waste Management Master Plan

Based on the significant reduction in the life expectancy of the only active landfill in West Grey, time and action is of the essence. It is not likely that West Grey will receive approval for a new landfill/Waste Disposal Site (WDS). Even if a new site is an option, the theoretical life expectancy of 17 years may not be sufficient time to complete all the steps to select, get approval and develop a new site. By way of this report, staff are recommending West Grey complete a Long-Term Waste Management Master Plan (LTWMMP) in 2024 to guide West Grey on its long-term vision for waste management.

Assuming waste diversion will be a key component of any and all strategies moving forward, a LTWMMP will assist in developing strategies to achieve the diversion requirements that are legislated. These are: divert half (50%) of the total waste produced in the province by 2030 and 80% by 2050. Over the past five years West Grey has an average diversion rate of 45.8% with a high of 50.3% in 2017 and a low of 42.6% in 2018. Only once in the last five years did the diversion rate meet and/or exceed the 2030 goal of 50%. At the time of writing this report, the 2022 diversion rate was not available.

In addition to waste diversion, LTWMMPs provide a timeline and long-term guidance to effectively manage sites and diversion programs to maximize municipal resources and waste related infrastructure (capital and operational). The anticipated population growth of the municipality will bring with it increased waste and service demands. Planning and balancing these needs to ensure resources are used most efficiently is important.

While no means unique to the Normanby and Bentinck sites - or West Grey for that matter – during the majority of their active fill life, the typical operations at the Normanby and Bentinck landfill/WDS did not include current Standard Operating Procedures, such as sorting and compacting. It is anticipated the LTWMMP will discuss a cost to benefit

analysis of “mining” the Normanby site followed by compaction to determine if there is an opportunity/benefit to create more space. A similar analysis could be completed on the twelve original trenches at the Bentinck site to determine if there is an opportunity to create more space at the Bentick site as well.

Financial Implications:

Outside of normal operations for 2023, there is no new additional impact to the 2023 operating budget. For 2024, there will be a budget request to complete a Long-Term Waste Management Master Plan.

Communication Plan:

Communication of this report is through the posting of council meeting agendas on the Municipality of West Grey website. Upon approval, staff will post the Landfill Annual Monitoring Reports on West Grey’s website.

Consultation:

Director of Infrastructure and Development
Supervisor, Urban Operations, Infrastructure and Development
Supervisor, Rural Operations, Infrastructure and Development
Environmental Officer, Infrastructure and Development
GM BluePlan

Attachments:

None.

Recommended by:

Geoff Aitken, CET, Manager of Public Works
Karl Schipprack, Director of Infrastructure and Development

Submission approved by:

Laura Johnston, Chief Administrative Officer

For more information on this report, please contact Geoff Aitken, Manager of Public Works at publicworks@westgrey.com or 519-369-2200 ext. 227.